

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) An apparatus comprising:
 - (a) a holder adapted to secure a cast metal part; and
 - (b) a cleaner dispersing system operable to remove residual casting material from the cast metal part; wherein the casting material is made using a water-soluble disintegration additive comprising an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte, wherein said cleaner dispersing system is operable to contact the metal part with said electrolyte; and
 - (c) a power source having a first electrode and a second electrode of opposite polarity operable to contact said electrolyte.
2. (original) An apparatus according to Claim 1, wherein said cleaner dispersing system comprises at least one spray head.
3. (original) An apparatus according to Claim 2, wherein said cleaner dispersing system additionally comprises a fluid recirculator operable to collect and recycle cleaning fluid.
4. (original) An apparatus according to Claim 1, wherein said cleaner dispersing system comprises a reservoir operable to immerse the metal part in cleaning fluid.

5. (original) An apparatus according to Claim 4, wherein said cleaner dispersing system comprises a fluid circulator operable to circulate fluid within said reservoir.

6. (original) An apparatus according to Claim 1, wherein said holder is suitable for holding an automotive drive train part.

7-8. (cancelled).

9. (currently amended) An apparatus according to Claim 1 [8], wherein said first electrode is adapted to contact the metal part.

10. (original) An apparatus according to Claim 9, wherein said first electrode is a cathode.

11. (currently amended) An apparatus according to Claim 1 [8], wherein said holder comprises said first electrode.

12. (currently amended) An apparatus according to Claim 1 [7], wherein the disintegration additive enhances electron/ion conduction when the casting material is contacted with said electrolyte.

13. (original) An apparatus according to Claim 1, wherein the disintegration additive volatilizes during the process of making the casting material.

14. (original) An apparatus according to Claim 1, wherein said residual casting material comprises foundry sand and a binder.

15. (original) An apparatus according to Claim 14, wherein said foundry sand comprises a material selected from the group consisting of synthetic sand, bank sand, silica sand, and mixtures thereof.

16. (original) An apparatus according to Claim 14, wherein said binder comprises a material selected from the group consisting of phenolic urethane resin, clay, and mixtures thereof.

17. (currently amended) An apparatus comprising:

(a) a cast part, a surface of which is coated with residual casting material comprising a water-soluble disintegration additive comprising an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte;

(b) a holder adapted to secure said cast part; and

(c) a fluid tank adapted to contain cleaning fluid comprising said electrolyte for cleaning said cast part; and

(d) a power source having a first electrode and a second electrode of opposite polarity operable to contact said electrolyte.

18. (original) An apparatus according to Claim 17, further comprising:

(d) a fluid propulsion device connected to the fluid tank; and

(e) a spray device connected to the propulsion device and adapted to apply

cleaning fluid on a surface of said cast part;

wherein the apparatus is operable to remove residual casting material from said metal part.

19. (original) An apparatus according to Claim 18, comprising a plurality of

said spray devices.

20. (original) An apparatus according to Claim 18, additionally comprising a

fluid recirculator operable to collect and recycle said cleaning fluid.

21. (original) An apparatus according to Claim 18, wherein said part is an

automotive drive train part.

22 - 23. (cancelled).

24. (currently amended) An apparatus according to Claim 17 [23], wherein

said first electrode is configured so as to contact said metal part.

25. (currently amended) An apparatus according to Claim 17 [23], wherein

said first electrode is a cathode.

26. (currently amended) An apparatus according to Claim 17 [23], wherein said holder comprises said first electrode.

27. (currently amended) An apparatus according to Claim 17 [22], wherein said disintegration additive enhances electron/ion conduction when said casting material is contacted with said electrolyte.

28. (original) An apparatus according to Claim 18, wherein said disintegration additive volatilizes during a process of making said metal part.

29. (original) An apparatus according to Claim 18, wherein said residual casting material comprises foundry sand and a binder.

30. (original) An apparatus according to Claim 29, wherein said foundry sand comprises a material selected from the group consisting of synthetic sand, bank sand, silica sand, and mixtures thereof.

31. (original) An apparatus according to Claim 29, wherein said binder comprises a material selected from the group consisting of: phenolic urethane resin, clay, and mixtures thereof.

32. (currently amended) A system for the production of a clean industrial part, comprising:

(a) a casting material for forming a cast suitable for casting a part, comprising
(i) foundry sand, (ii) binder, and (iii) a ~~water-soluble~~ disintegration additive consisting essentially of an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte, wherein a portion of said casting material remains on said part after casting;

(b) a parts washer operable to contact said cast part with cleaning fluid comprising said electrolyte; and

(c) a power source having a first electrode and a second electrode of opposite polarity operable to contact said electrolyte.

33. (original) A system according to Claim 32, wherein said parts washer comprises one or more spray devices operable to apply said cleaning fluid on a surface of said cast part.

34. (original) A system according to Claim 32, wherein said parts washer comprises a fluid recirculator operable to collect and recycle said cleaning fluid.

35. (original) A system according to Claim 32, wherein said parts washer comprises a reservoir operable to immerse said cast part in said cleaning fluid.

36. (original) A system according to Claim 35, wherein said parts washer additionally comprises a fluid circulator operable to circulate fluid within said reservoir.

37. (original) A system according to Claim 32, wherein said parts washer comprises a holder operable to hold an automotive drive train part.

38-39. (cancelled).

40. (currently amended) A system according to Claim 32[39], wherein said first electrode is configured so as to contact said cast part which is electrically conductive.

41. (currently amended) A system according to Claim 32[39], wherein said first electrode is a cathode.

42. (currently amended) A system according to Claim 32[39], wherein said parts washer comprises a holder for said cast part, and said holder comprises said first electrode.

43. (currently amended) A system according to Claim 32[38], wherein said disintegration additive enhances electron/ion conduction when said casting material is contacted with said electrolyte.

44. (original) A system according to Claim 32, wherein said disintegration additive volatilizes from said casting material during the process of making said cast part.

45. (original) A system according to Claim 32, wherein said foundry sand comprises a material selected from the group consisting of: synthetic sand, bank sand, silica sand, and mixtures thereof.

46. (original) A system according to Claim 32, wherein said binder comprises a material selected from the group consisting of: phenolic urethane resin, clay, and mixtures thereof.

47. (currently amended) A method for making a clean metal part, comprising:

(a) casting a metal part using a mold initially formed using a casting material comprising (i) foundry sand, (ii) binder, and (iii) a water-soluble disintegration additive comprising an ionic compound that promotes disintegration of the casting material when in the presence of an electrolyte;

(b) cleaning said cast metal parts using a parts washer comprising a cleaner dispensing system that is operable to contact the metal part with said electrolyte; and

(c) a power source having a first electrode and a second electrode of opposite polarity operable to contact said electrolyte.

48. (original) A method for making a clean metal part according to Claim 47, wherein said parts washer comprises at least one spray device operable to apply cleaning fluid on a surface of said cast metal part.

49. (original) A method for making a clean metal part according to Claim 48, wherein said parts washer additionally comprises a fluid recirculator operable to collect and recycle said cleaning fluid.

50. (original) A method for making a clean metal part according to Claim 47, wherein said fluid dispersion system comprises a reservoir operable to immerse said metal part in cleaning fluid.

51. (original) A method for making a clean metal part according to Claim 50, wherein said fluid dispersion system comprises a fluid circulator operable to circulate said cleaning fluid within said reservoir.

52. (original) A method for making a clean metal part according to Claim 47, wherein said parts washer comprises a holder suitable for holding an automotive drive train part.

53 - 54. (cancelled).

55. (currently amended) A method for making a clean metal part according to Claim 47 [54], wherein said first electrode is configured so as to contact said cast metal part.

56. (currently amended) A method for making a clean metal part according to Claim 47 [54], wherein said first electrode is a cathode.

57. (currently amended) A method for making a clean metal part according to Claim 47 [54], wherein said parts washer comprises a part holder comprising said first electrode.

58. (original) A method for making a clean metal part according to Claim 47, wherein said disintegration additive promotes disintegration of said foundry cast material from said cast metal part.

59. (original) A method for making a clean metal part according to Claim 53, wherein said disintegration additive enhances electron/ion conduction when said foundry casting material is contacted with said electrolyte.

60. (original) A method for making a clean metal part according to Claim 47, wherein said disintegration additive volatilizes during the process of making a cast with said foundry casting material.

61. (original) A method for making a clean metal part according to Claim 47, wherein said foundry sand comprises a material selected from the group consisting of synthetic sand, bank sand, silica sand, and mixtures thereof.

62. (original) A method for making a clean metal part according to Claim 47, wherein said binder comprises a material selected from the group consisting of phenolic urethane resin, clay, and mixtures thereof.

63. (currently amended) A method for making a clean metal part according to Claim 47, wherein said cleaning step further comprises:

- (i) physically separating said cast metal part from said mold, to expose a metal part, wherein residual mold material remains on a surface of said metal part;
- (ii) attaching said metal part to said [a] power source having a first and a second electrode of opposite polarities, wherein said first electrode contacts said metal part;
- (iii) contacting said metal part with said [an] electrolyte, wherein said electrolyte is in contact with said second electrode; and
- (iv) generating current through said electrolyte, from said first electrode to said second electrode.

64. (original) A method for making a clean metal part according to Claim 63, wherein said first electrode is a cathode.

65. (original) A method for making a clean metal part according to Claim 63, wherein said contacting is by immersing said metal part in a reservoir of said electrolyte.

66. (original) A method for making a clean part according to Claim 63, wherein said contacting is by spraying said electrolyte on a surface of said metal part.